

**Notice of Allowability**

Application No.

10/802,758

Applicant(s)

ITO, HITOSHI

Examiner

Theresa T. Doan

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/21/06.
2. ☒ The allowed claim(s) is/are 1-3, 5-6, 8, 9 and 21-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/22/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The new title of the invention is accepted by the Examiner.

### ***Drawings***

2. The drawings were received on 02/21/06. These drawings are accepted by the Examiner.

## **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

This application is in condition for allowance except for the presence of claims 10-20 non-elected claims without traverse. Accordingly, claims 10-20 have been cancelled.

### ***Reasons for Allowance***

4. Claims 1-3, 5-6, 8-9 and 21-25 are allowed.
5. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose all the limitations recited in the base claim

1. Specifically, the combination of a semiconductor device, comprising: an element isolation insulator, which is formed on the surface side of the semiconductor substrate to provide electrical insulation from other elements, a height of a surface of the element isolation insulator being equal to or lower than that of the surface side of the semiconductor substrate; a stopper which is formed of a material different from that of the element isolation insulator and which is formed on the element isolation insulator so as to protrude from the surface of the element isolation insulator, the stopper being at a distance from a boundary between the source region/drain region and the element isolation insulator; and an elevated source/drain which is formed on the source region and the drain region so as to be elevated from the surface side of the semiconductor substrate, wherein a condition of  $B > A/\tan\theta$  is satisfied, where  $\theta$  is an angle which is formed by a face that a boundary face of the boundary is extended in a height direction and a facet of the elevated source/drain between the source region/drain region and the stopper, A is the distance from the boundary to the stopper, and B is a height by which the stopper protrudes from the surface of the element isolation insulator.

The prior art of record also fails to disclose all the limitations recited in the base claim 8. Specifically, the combination of a semiconductor device, comprising: a stopper which is formed of a material different from that of the element isolation insulator and which is formed on the element isolation insulator so as to protrude from the surface of the element isolation insulator, the stopper being at a distance from a boundary between the source region/drain region and the element isolation insulator; and an

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elevated source/drain which is formed on the source region and the drain region so as to be elevated from the surface side of the semiconductor substrate, wherein the element isolation insulator comprises: a first insulating film which is formed inside a trench which is formed in the semiconductor substrate to form an element isolation region; and a second insulating film which is formed inside the first insulating film, and wherein the stopper is embedded between the first insulating film and the second insulating film and formed so as to protrude from a surface of the first insulating film.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Doan whose telephone number is (571) 272-1704. The examiner can normally be reached on Monday to Friday from 7:00AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WAEL FAHMY can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Theresa Doan  
April 25, 2006.



Replacement Sheet 1/2

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"Prior Art"

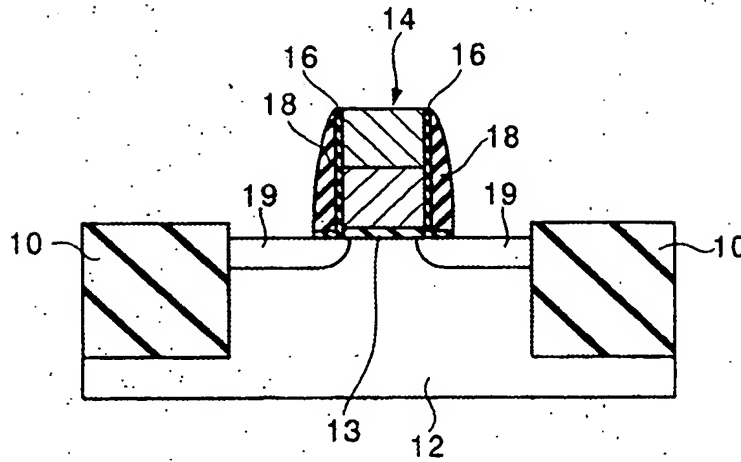


FIG.1

"Prior Art"

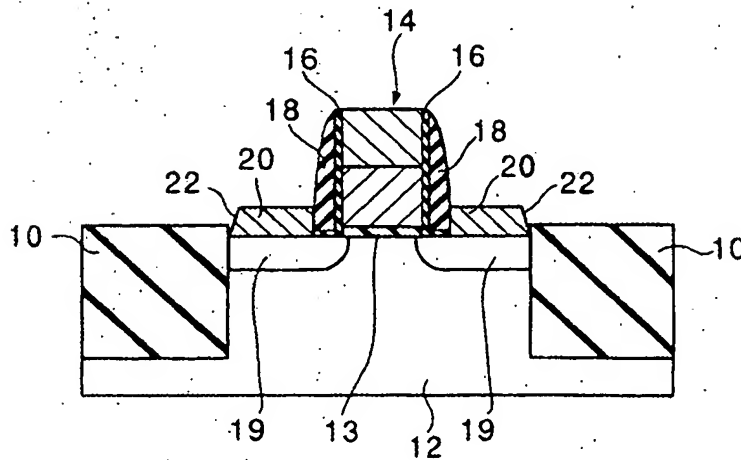


FIG.2

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## Replacement Sheet 2/2

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TD

04/25/06

"Prior Art"

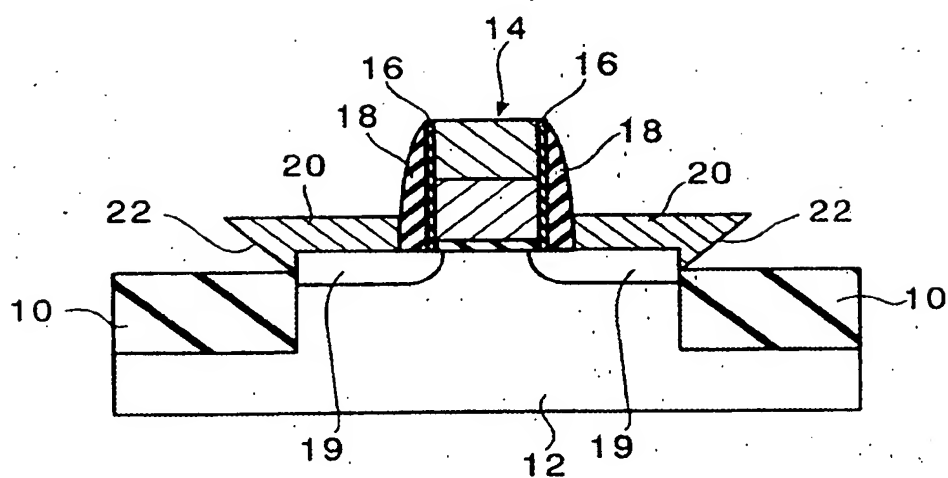


FIG.3